

**DETAILED ACTION**

***Election/Restrictions***

1. The restriction requirement was made final in the office action dated 4/2/2009. As such, the restriction requirement is maintained.

***Specification***

2. The substitute specification submitted 5/26/2006 is acknowledged, and the requirement for a substitute specification is withdrawn.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Kustov et al. (US 6388145).

In regard to claims 1 and 13, Kustov teaches a ZSM-5 zeolite that is modified by the impregnation with zinc nitrate and conversion to zinc oxide, forming a nanocomposite (column 2, lines 20-31). The ZnO is present in the zeolite channels. As the material taught by Kustov is the same as the material required by the claims, UV resistance is considered to be inherent to the material taught by Kustov. This is further supported by the well known UV resistance offered by zinc oxide. That the guest material is directional with high-order as a result of the quantum confinement effect is

considered inherent to the material disclosed by Kustov, as the material disclosed by Kustov is made by the same process from the same materials as the instant material.

***Response to Arguments***

5. Applicant's arguments filed 10/2/2009 have been fully considered but they are not persuasive.

The argument that Kustov does not disclose a nanocomposite is not persuasive. It is agreed that Kustov does not utilize the term nanocomposite. However, the material disclosed by Kustov is produced utilizing the same process and the same materials as the instant invention. Kustov discloses impregnation of ZSM-5 zeolite with  $\text{Zn}(\text{NO}_3)_2$ , and then heating to convert the  $\text{Zn}(\text{NO}_3)_2$  to ZnO in the zeolite channels (col. 3, lines 4-18). The instant application discloses the use of ZSM-5 (see claim 13) as a preferred host material, and that  $\text{Zn}(\text{NO}_3)_2$  may be utilized as the guest material precursor. The instant method of production is impregnating the zeolite with the initiating material and then heating to produce a nanocomposite (see claims 5 and 6). The product disclosed by Kustov is produced utilizing the same process and same materials as the instant nanocomposite and therefor it must be the same as the instant material.

The argument that the material disclosed by Kustov is not UV-resistant is not persuasive. The fact that the material disclosed by Kustov is intended as a catalyst in no way precludes it from being UV-resistant. The material disclosed by Kustov is the same as the instant material and therefor must inherently possess the same properties, such as UV-resistance.

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **KEVIN M. JOHNSON** whose telephone number is (571)270-3584. The examiner can normally be reached on Monday-Friday 7:30 AM to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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